

**CITY of
SPRINGFIELD**



January 12, 2000

Mr. Edward Wilbanks
Park Central Flea Market
429 N. Boonville
Springfield, MO 65806-1001

Dear Mr. Wilbanks:

Due to the release of gasoline into the sanitary sewer, you have been experiencing gasoline odors or vapors entering your premises at 429 N. Boonville by way of a plumbing connection to the City sanitary sewer.

The fact that these odors or vapors may have entered your building as a result of your private sewer line being connected to the City sanitary sewer is of great concern to us. Regardless of the current situation involving gasoline vapors or odors, it appears that the condition of your private sewer plumbing could allow unwanted gases, vapors, and odors to enter your premises. At any given time, there may be a number of dangerous gases present in a City sanitary sewer that can present potentially serious health and safety hazards to you and the occupants at this location. These potentially dangerous gases are a part of the natural process of the decomposition of organic matter. Obviously, the organic matter that is present in the City sanitary sewer is there by design. The City sanitary sewer system is intended for the disposal of human and other wastes and acts as a conveyance of those wastes to the wastewater treatment plant where it is properly treated and clean water is released into area streams. Some of the more common dangerous or noxious gases encountered in sewers are discussed in the enclosed table.

There are, of course, many other substances that can be present in the City sanitary sewer. Liquid wastes may be produced by wet-process industries or commercial establishments. Industrial and commercial wastewaters vary greatly in both quantity and pollutional capacity such that it is impossible to assign fixed values to their common constituents. Some of these wastes may be legally discharged into the City sewer system when they are sufficiently pretreated or provided the volume is small with respect to the normal sewage flow. On occasion, other substances, raw materials, bulk liquids, off-specification products, date expired chemicals, etc. have been either released accidentally

429 N. Boonville

or improperly disposed of by industries or commercial establishments. Many individuals have improperly disposed of left-over household chemical products by pouring them down a drain at their private residence.

In summary, private sewer plumbing which is in good repair and meeting local plumbing codes is designed to prevent gases or vapors that may be present in the City Sanitary sewer system from venting back into the building. The gasoline odors apparently entered the building because of a broken pipe. Any drain that has not had water running through it for some period of time may not protect the premises due to the water seal having evaporated between the sewer and the occupied indoor space. Some water seals are visible and used frequently; such as the water that remains in the bottom of a toilet stool or in the drain under a kitchen sink. By looking under a sink one can observe the waste piping actually reversing direction to form a water seal or trap. Other water seals or traps may be hidden under floors or inside walls or used infrequently. Put simply, no water, no seal, no protection. Infrequently used drains or traps should have a gallon or more of water poured down them periodically so that the trap or seal can serve to prevent sewer gases and vapors from entering a building structure. After pouring water into a dried out drain or trap, by adding a small amount of mineral oil to the drain or trap may help to keep the water from evaporating so quickly in the future.

The conditions discussed above indicates that some plumbing deficiencies may exist in the building and that steps should be taken to correct the problem. Should you have any further questions you may call the City wastewater utility at 864-1923. Any questions regarding the condition or repair of your private sewer plumbing should be directed to the City Department of Building Development Services at 864-1056. Any questions or concerns relating to personal health or exposures may be directed to the Springfield/Greene County Health Department at 864-1658.

Sincerely yours,



Gene Pabst

Pretreatment Inspector

Industrial Pretreatment Program

cc: Rick Garner, P.E., Acting Director of Building Development Services
Bob Schaefer, P.E., Assistant Director of Public Works-Environmental Services
Ed Malter, P.E., Superintendent of Sanitary Services
Bill Applegate, City Utilities of Springfield
Karl Barke, Health Department
Barry Rowell, Fire Department

COMMON NOXIOUS OR DANGEROUS GASES ENCOUNTERED IN SEWERS*

Name of Gas	Chemical Formula	Specific Gravity of Vapor Density** (Air=1)	Explosive Range (% by volume in air)		Common Properties (Percentages below are per cent in air by volume)	Most Common Sources in Sewers
			Lower Limit	Upper Limit		
Oxygen (In air)	O ₂	1.11	Not Flammable		Colorless, odorless, tasteless, non-poisonous gas. Supports combustion..	Oxygen depletion from poor ventilation and absorption or chemical consumption of available O ₂ .
Gasoline Vapor	C ₈ H ₁₂ to C ₉ H ₂₀	3.0 to 4.0	1.3	7.0	Colorless, odor noticeable in 0.03%. Flammable. Explosive.	Leaking storage tanks, discharges from automotive repair establishments, and commercial or home uses as a cleaning solvent.
Carbon Monoxide	CO	0.97	12.5	74.2	Colorless, odorless, tasteless, non-irritating. Flammable. Explosive.	Natural gas utility, gas mains, services, and other sources. Manufactured fuel gas. Products of combustion, motor exhausts, fires of any kind.
Hydrogen	H ₂	0.07	4.0	74.2	Colorless, odorless, tasteless, non-poisonous, flammable. Explosive. Propagates flame rapidly, very dangerous.	Natural gas utility, gas mains, services, and other sources. Sewer gas. Manufactured fuel gas.
Methane	CH ₄	0.55	5.0	15.0	Colorless, tasteless, odorless, non-poisonous. Flammable. Explosive.	Natural gas utility, gas mains, services, and other sources. Manufactured fuel gas. Sewer gas.
Hydrogen Sulfide	H ₂ S	1.19	4.3	46.0	Rotten egg odor in small concentrations but sense of smell rapidly impaired. Odor not evident at high concentrations. Colorless. Flammable. Explosive. Poisonous.	Petroleum fumes, sewer gas. Fumes from blasting under some conditions.
Carbon Dioxide	CO ₂	1.53	Not flammable.		Colorless, odorless, non-flammable. Not generally present in dangerous amounts unless there is already a deficiency of oxygen.	Products of combustion. Sewer gas.
Nitrogen	N ₂	0.97	Not flammable.		Colorless, tasteless, odorless. Non-flammable. Non-poisonous. Principal constituent of air (about 79%).	Sewer gas.
Ethane	C ₂ H ₆	1.05	3.1	15.0	Colorless, tasteless, odorless, non-poisonous. Flammable. Explosive.	Natural gas utility, gas mains, services, and other sources.

*From Manual of Instruction for Sewage Treatment Plant Operators and Safety in Wastewater Works. WPCF-1975.

**Gases with a specific gravity less than 1.0 are lighter than air, those more than 1.0 heavier than air.

Memo

To: File - 429 N. Boonville (Park Central Flea Market)
From: Gene Pabst *GP*
Date: January 11, 2000
Subject: Gasoline in the sanitary sewer.

This office received a call from Park Central Flea Market, 429 N. Boonville, on January 11, 2000 at 10:45 A.M. stating that they had a gasoline odor in their building. Randy Lyman told them to call the Fire Dept. and that we would respond. Karen Chandler and I went to the above location and checked MH 83 (See attached map) and obtained a 25% LEL. We opened the manhole and placed a barricade over it. Karen rechecked and the readings were already going down. We then went into the Flea Market (Owned by Edward Wilbanks) and talked to them. The Fire Dept. was already there. Mr. Wilbanks and Bat. Chief Barry Rowell, Station #2, explained that there was an odor coming from the basement. Karen and I checked a plugged floor drain in the basement and obtained 0% LEL around the drain. We then went to where the plumbing exits the building. At this point there was 1 1/2" pipe coming from the main line that had been broken off. There was some paper placed in the broken pipe. We pulled the paper out of the broken pipe and checked the line with our CGI meter and obtained 0% LEL. At this time the Fire Dept. brought in their Ames Meter and also obtained a 0% LEL at this point. The Fire Dept. had just checked MH 82 and obtained a 0% LEL. Gasoline odor was still present in the building. We thought that when we opened MH 82 (just to the North of the Flea Market) we changed the venting of the line and therefore we were not getting any readings in the Flea Market's private line. We told Mr. Wilbanks that he should repair the broken line. He said that he would take care of it. The Fire Dept. left at this time.

Karen and I then went to the North of the Flea Market and talked to Art Scott of Fleet Maintenance to see if they had been working on a gasoline tank today. He told us that they have not done any of that type of work on a vehicle in several weeks. We then went to the Repo. Car Lot at the corner of Tampa and Boonville. We talked to two young men who were working on a pickup truck in their building. They explained that they had knocked over a can of gasoline around 9:30 A.M. and that they decided to flush it with water around 10:00 or 10:30 A.M. this morning. Apparently the gasoline had drained into a sump in the southwest corner of their garage. They said that it did not spill very much. We told them that a little goes a long way, especially in the sanitary sewer. We told them that in the future to clean up spilled gasoline with floor dry. We talked to Ron Morgan, owner, and he said that his employees did spill some gasoline this morning and that he noticed a strong gasoline odor in their bathrooms. He said that he went outside to see if the odor was coming from Fleet Maintenance next door. He then realized that his employees had spilled the gasoline and were flushing it with water. He told them to use floor dry in the future.

429 N. Boonville

We then checked the following manholes with these results:

11:50 A.M.	MH 81	0%	
	MH 82	is apparently under the asphalt.	
11:53 A.M.	MH 84	0%	
11:55 A.M.	MH 66	0%	
11:58 A.M.	MH 62	0%	
12:01 P.M.	MH 83	0%	No gasoline odor

12:05 P.M. We talked to owner of the Flea Market and the gasoline odor in the building was better. We then tried to return to the office but the battery was dead on vehicle 4126. The Service Center came and gave us a jump start.

After returning to the office I called Barry Rowell, Bat. Chief, to inform him of what we found. This was at 12:36 P.M.

I returned to the area and checked the following manholes:

1:32 P.M.	MH 83	0%	No odor and closed lid
1:37 P.M.	MH 81	0%	
1:40 P.M.	MH 84	0%	

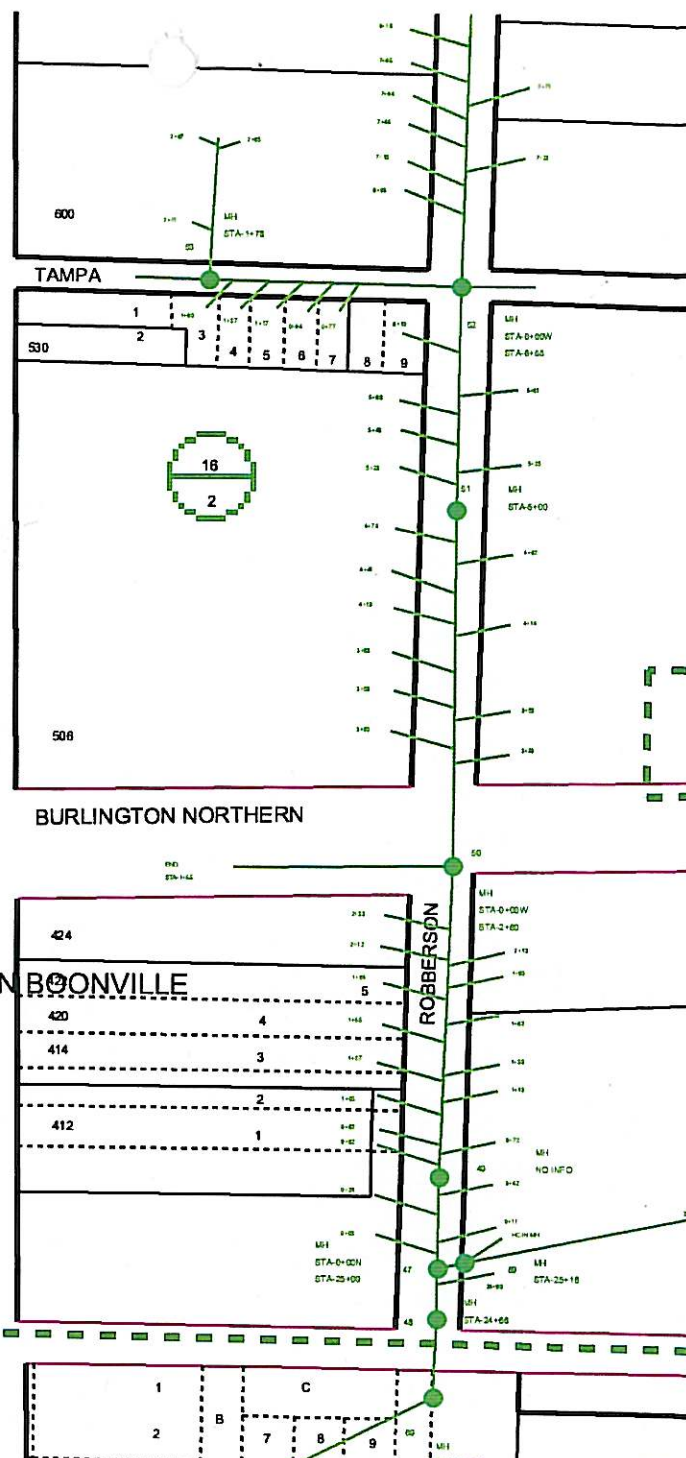
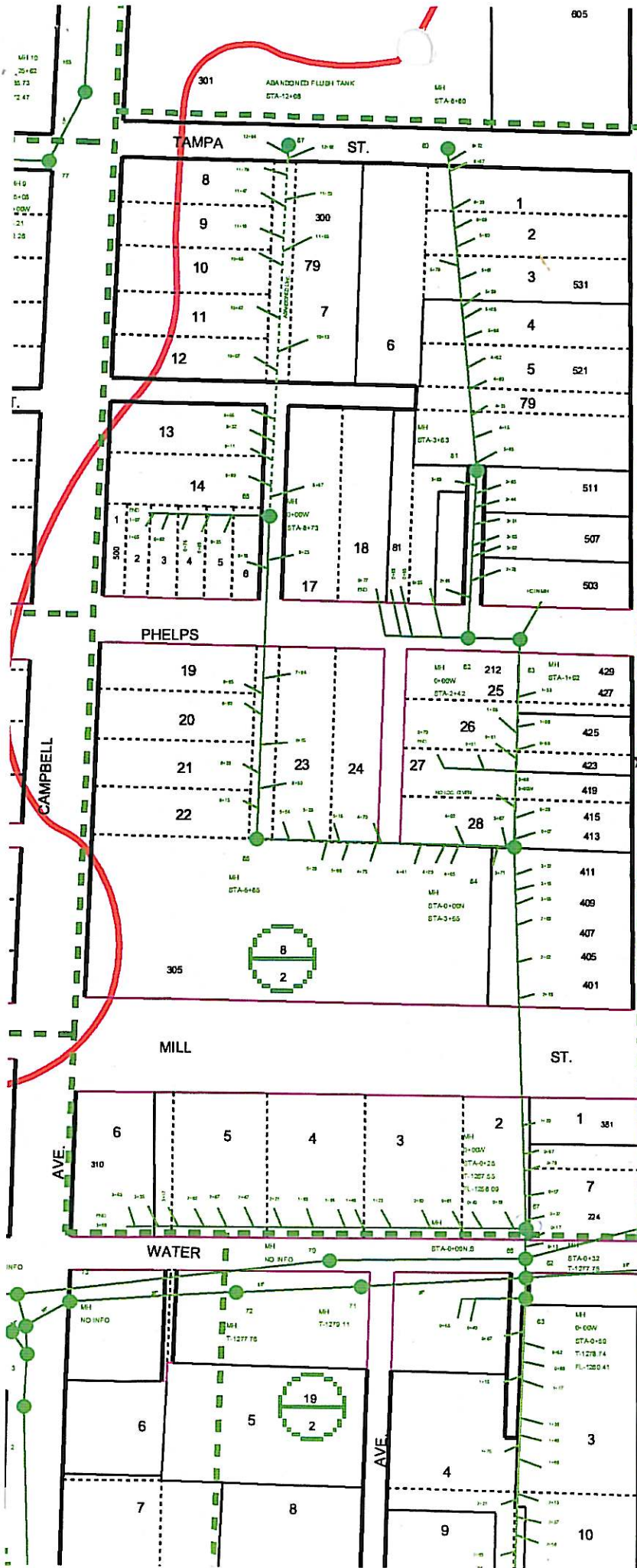
I rechecked the following manholes:

2:35 P.M.	MH 81	0%	
2:42 P.M.	MH 83	0%	No odor
2:42 P.M.	MH 84	0%	

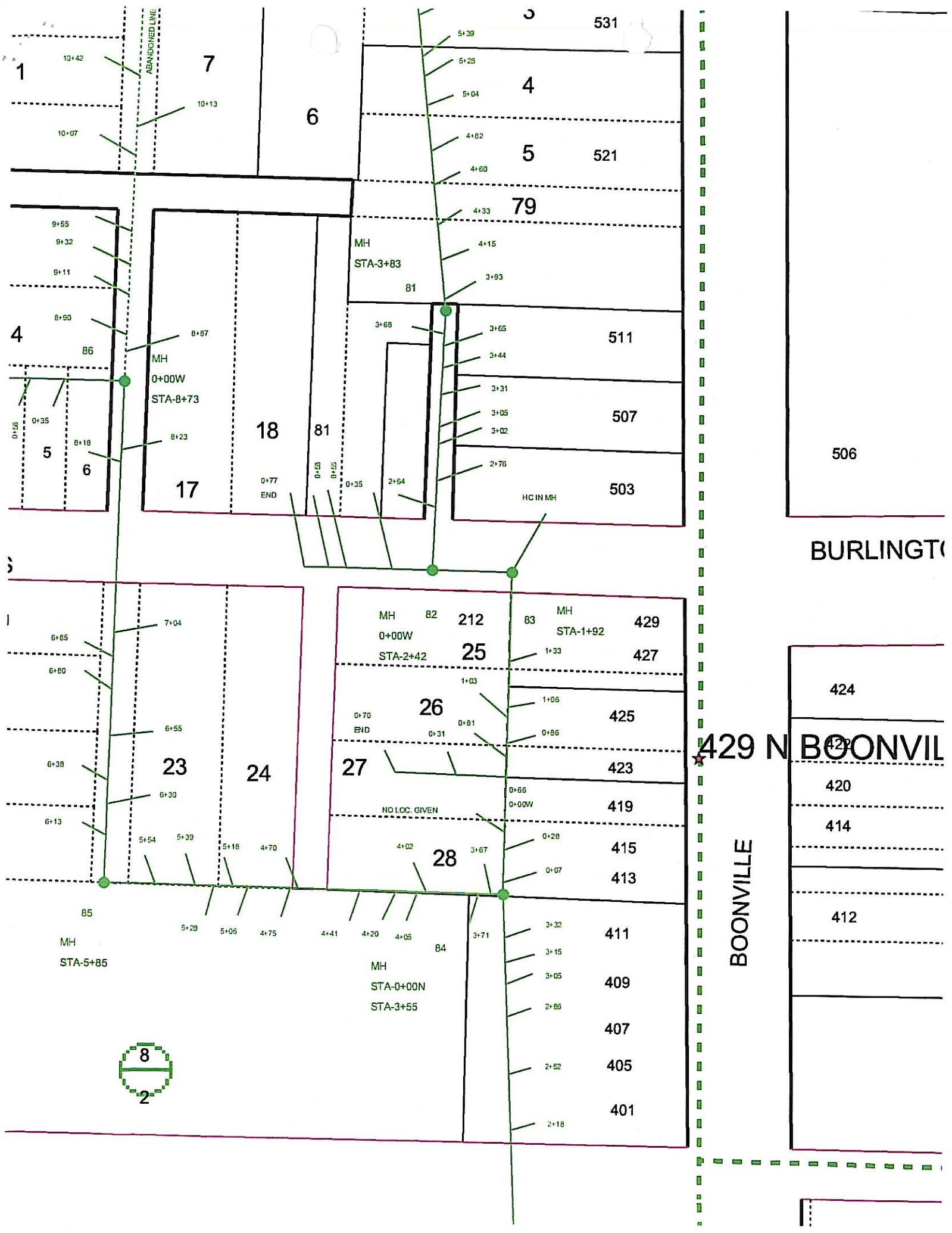
I talked to the owner of the Flea Market and they said that they were getting back to normal. They had closed the front door, but still had the back door open.

I checked MH 83 at 9:15 A.M. on January 12, 2000 and obtained 0% LEL and there was no odor present in the sanitary sewer. I talked to the owner of the Flea Market and told him what I had found when I checked the sanitary sewer.

Apparently this situation has been corrected.



POOR CENTRAL FIRE MKT,
 429 BOONVILLE
 GASOLINE ODOR
 IN BASEMENT.
 831-7516
 DOROTHY



City of Springfield
Water Pollution Control Section
Pollution Complaint/Report Form

Date 12/16/91

Report From:

- ☐ Citizen
☐ Fire Dept.
☐ Public Information Office
☐ Health Department
☒ Other SERVICE CENTER - WEEKEND CREW

Received By: R. LYMAN
Referred To: B. CORSON
Date of Incident: 12-15-91

Complainant Information:

Name PARK CENTRAL FLEA MKT.
Address 429 N. BOONVILLE
Phone _____
Directions (if needed): _____

Responsible Party Information:

Name FLEET SERVICE
Address _____
Phone _____

Possible contamination of: ☐ soil ☐ groundwater
☐ surface water what body?
☒ other SANITARY SEWER

Other pertinent information: _____

Who to contact:

- ☐ DNR 417-837-6950
☐ DNR 314-634-2436
☐ EPA 913-236-3778
☒ Fire Dept. 864-1719
☐ Police Dept. 864-1719
☐ Bob Schaefer
☐ CU 831-8320
☐ Street Dept.

- ☐ Health Dept.
☐ Sewer Maintenance
☐ Sewer Construction
☐ Chemtrec 1-800-424-9300
☐ DOT
☐ NRC 1-800-424-8802
☐ Other _____

Details of incident: _____

Action needed: _____

(over)

ADDRESS 429 N. Boonville

Investigation Results

checked manholes for contact readings
on 12-16-91 at 10:30 AM

readings were

manhole 15	0 9/16
manhole 16	0 10/16
manhole 17	0 9/16

doors were open advise to close

advised management of problem

He indicated this was caused
by cleaning the floor and
wash water was discharge to
sewer.

would find alternate method
to clean garage floor

